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PRE-APPEAL BRIEF REQUEST FOR REVIEW		Docket Number: 09546-0027US1 / 55776 US SB/ET
I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Mail Stop AF, Commissioner for Patents, Box 1450, Alexandria, VA 22313-1450. Date of Deposit Signature Typed or Printed Name of Person Signing Certificate	Application Number 10/575,720	Filed April 13, 2006
	First Named Inventor Sjodin et al.	
	Art Unit 3785	Examiner Alexis K. Cox

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a Notice of Appeal.

The review is requested for the reason(s) stated on the attached sheet(s).
No more than five (5) pages are being provided.

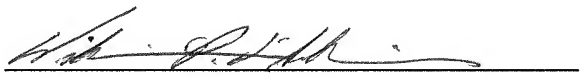
I am the

☐ applicant/inventor.

☐ assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

☒ attorney or agent of record 59,005
(Reg. No.)

☐ attorney or agent acting under 37 CFR 1.34.
Registration number if acting under 37 CFR 1.34



Signature

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June 15, 2011
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below'.

☒ Total of 1 form is submitted.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	: Sjodin et al.	Art Unit	: 3785
Serial No.	: 10/575,720	Examiner	: Alexis K. Cox
Filed	: April 13, 2006	Conf. No.	: 3242
Title	: A PLATE HEAT EXCHANGER		

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Applicants submit this request under the Pre-Appeal Conference Pilot Program described in the U.S. Patent and Trademark OG Notice, "New Pre-Appeal Brief Conference Pilot Program," dated July 12, 2005 and extended until further notice as of January 10, 2006. This request is being filed with a Notice of Appeal. Applicants request review of the matters discussed below by a panel of examiners, because the rejections under 35 U.S.C. § 103 are clearly improper and without basis.

In the interest of furthering prosecution, Applicants previously filed a response to the final Office action of February 17, 2011 amending claims 31, 49 and 61 to remove the word "about." The applicant requested that these amendments be admitted pursuant to 37 C.F.R. §1.116(b)(1), which indicates that "[a]fter a final rejection . . . [a]n amendment presenting rejected claims in better form for consideration on appeal may be admitted." These amendments present claims 31, 49 and 61 in better form for appeal because, by deleting the word "about," they render the rejections under 35 U.S.C. §112, second paragraph, in the final office action moot.

No claim amendments accompany the instant Pre-Appeal Brief Request for Review. A Petition for a one-month extension of time to and including June 17, 2011 accompanied the previously-filed response to the final Office action.

Claims 31, 34, 36-49, 52 and 54-66 are pending in this application. Of these, claims 31, 49, 61, 63 and 64 are independent. Claims 31, 49, 61, 63 and 64 were rejected under 35 U.S.C. §103(a) as being unpatentable over Fuerschbach (U.S. 4,815,534) in view of Usui (U.S. 4,223,826) and Mizuhara (U.S. 4,497,772). Various of the dependent claims were rejected under 35 U.S.C. §103(a) as unpatentable over the foregoing references either alone or in combination

with one or more of Wells (U.S. 3,675,311), an article in the Encyclopedia Britannica and/or Blomgren (US 6,016,865).

Applicants ask that the panel review the §103 issues below, which Applicants submit will dispose of the entire appeal. Applicants reserve the right to expand these issues and or present new issues should they subsequently file an appeal.

(1) Claim 31 recites a plate heat exchanger with plates of stainless steel containing chromium. The heat exchanger has one or more port channels and one or more connection surfaces for later connecting the port channels to a pipe member. The one or more connection surfaces are formed with a nickel-based material having a thickness between 20 and 50 μm. The material is bound to the stainless steel through diffusion of atoms from the material into the stainless steel and from the stainless steel into the material and has a melting temperature such that the material does not melt when it is later connected to the pipe member.

Thus, claim 31 emphasizes that the nickel-based material forms a connection surface for a later connection (e.g., by brazing) to a pipe member. In other words, the nickel-based material is in-place before a pipe member is brazed to the connection surface.

Even if it somehow had been obvious to combine the cited references in the manner the Examiner suggested would have been obvious, which Applicants do not concede, the subject matter now recited in claim 31 would not have resulted. The Examiner indicates that "it would have been obvious . . . to make the system of Fuerschbach et al using the brazing technique of Usui" and that "the substitution of brazing alloy of Mizuhara would have been obvious." Office action, page 4. As discussed below, this combination would not have produced the claimed subject matter.

First, the "system of Fuerschbach" does not include a plate with a connection surface for later connection (*e.g.,* by brazing) to a pipe member, where the connection surface includes a nickel-based material, as recited in claim 31. It appears that the Examiner would consider Fuerschbach's top plate 14, for example, as corresponding to the claimed "heat exchanger plates." *See* office action, page 3. Fuerschbach discloses that this top plate 14 can be either carbon or stainless steel plate stock. *See, e.g.,* col. 6, lines 17-20 and FIG. 2. Fuerschbach top

plate does not have a connection surface for later connection (*e.g.,* by brazing) to a pipe member, where the connection surface includes a nickel-based material, as recited in claim 31.

Second, if one had made the Fuerschbach system "using the brazing technique of Usui," as the Examiner suggests would have been obvious, the resulting structure would not have included a plate with a connection surface for later connection (e.g., by brazing) to a pipe member, where the connection surface includes a nickel-based material, as recited in claim 31. As indicated above, the Usui patent discloses a method of brazing stainless steel to stainless steel or to another metal. Col. 1, lines 6-7. The method includes plating the surfaces to be joined with copper (Cu) and then brazing the Cu-plated surfaces together using a copper base-tin alloy brazing material. *See* col. 2, lines 30-36 and 49-53 and Abstract.

Usui's Cu-plated surface, which presumably would correspond to the claimed "connection surface" under the Examiner's view, is not a connection surface for later connection (e.g., by brazing) to a pipe member, where the connection surface includes a nickel-based material, as recited in claim 31. Thus, even if the Fuerschbach system had been made "using the brazing technique of Usui," the resulting structure would not have included a connection surface for later connection (e.g., by brazing) to a pipe member, where the connection surface includes a nickel-based material, as recited in claim 31.

Third, if one had made the Fuerschbach system "using the brazing technique of Usui," but replaced Usui's copper base-tin alloy brazing material with Mizuhara's brazing alloy that includes nickel, as the Examiner suggests would have been obvious, the resulting structure still would not have included a plate with a connection surface for later connection (e.g., by brazing) to a pipe member, where the connection surface includes a nickel-based material, as recited in claim 31. That is because, prior to brazing, the portion of the plate that presumably would correspond to the "connection surface" of claim 31 would be the Cu-plated surface; it would not include a nickel-based material, as recited in claim 31. Instead, in this combination, nickel would only be introduced during the brazing process. Therefore, it would not have been present in advance of the brazing.

Thus, even if the cited references had been combined in the manner the Examiner suggests would have been obvious, this would not have resulted in a plate with a connection

surface for later connection (e.g., by brazing) to a pipe member, where the connection surface includes a nickel-based material, as recited in claim 31.

The applicant submits that claim 31 is allowable for at least the foregoing reasons.

(2) Claim 31 also recites a plate heat exchanger with plates of stainless steel containing chromium, one or more port channels and one or more connection surfaces that are formed with a material that does not melt when later connected to the pipe member.

The cited references, alone or in any reasonable combination, do not disclose or render obvious the claimed subject matter. Moreover, even if a person of ordinary skill somehow did attempt to combine the cited references in the manner the Examiner suggested would have been obvious, the claimed subject matter would not have resulted.

As discussed above, in the supposedly-obvious combination of the cited references, Mizuhara's nickel-containing brazing alloy would be used to connect (*e.g.,* braze) a threaded nipple (*e.g.,* one of the nipples IH, OH, IC, OC in Fuerschbach's patent) to a connection surface on a heat exchanger plates. Thus, in the supposedly-obvious combination, Mizuhara's nickel-containing brazing material would melt in order to form the connection between the threaded nipple and the connection surface.

Accordingly, even if a person of ordinary skill somehow did attempt to combine the cited references in the manner the Examiner suggested would have been obvious, the resulting structure would not include connection surfaces formed with a material that does not melt when later connected to a pipe member, as recited in claim 31.

The applicant submits that claim 31 is allowable for the foregoing additional reasons as well.

(3) Claim 31 also recites that the nickel-based material that forms the connection surface prepared for a later connection of the one or more port channels to a pipe member has a thickness between 20 and 50 μm.

The Cu-plating disclosed in Usui has a thickness of 4 μm. *See* col. 3, line 21. None of the other cited references disclose or provide a reason why a person of ordinary skill would have formed a connection surface with a nickel-based material having a thickness between 20 and 50 μm, as recited in claim 31.

The applicant submits that claim 31 is allowable for the foregoing additional reasons as well.

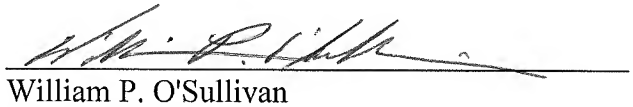
Independent claims 49 and 61 recite subject matter that is similar to the subject matter of claim 31 and, therefore, are allowable for at least the same reasons as claim 31, discussed above.

Claims 34, 36-48, 52, 54-60, 62, 65 and 66 depend from either claim 31, 49, 61, 63 or 64 and, therefore, are allowable for at least the same reasons as the claims from which they respectively depend.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper. Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: June 15, 2011



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